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## Research Article

### Learning Preferences and Academic Outcomes: Insights from Franciscan-Managed Schools

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#### ABSTRACT

This study examines the relationship between learning preferences and academic performance among third-year high school students in two Franciscan-managed schools in Negros Oriental, Philippines. Using the Felder-Silverman Learning Style Model and a descriptive research design, the profiles and preferences of 120 students were analyzed across four dimensions. Pearson's correlation revealed a significant relationship between gender and academic performance, with females outperforming males, while family size and income showed no significant impact. The sensing/intuitive learning style exhibited a weak but positive relationship with academic outcomes, highlighting the need for differentiated instructional strategies. The findings advocate for gender-sensitive and adaptive teaching approaches to enhance student engagement and holistic development in Franciscan-managed schools.

**Keywords:** *Learning styles, Academic performance, Franciscan-managed schools, Gender disparities, Instructional strategies*

#### Introduction

An increasing disparity between teachers and students and between teaching methods and learning needs underscores the challenges currently facing the Philippine educational system. Teachers often misconstrued these differences as deficiencies in learners, resulting in frustrations on both sides of the academic spectrum. This incongruence hinders the effective delivery of education and diminishes the

potential of both educators and students (Sailer et al., 2024).

Amidst these challenges, learners' diverse experiences and backgrounds often go unaddressed, leading to subpar academic performance. Traditional classroom settings frequently fail to accommodate students' unique strengths, weaknesses, and preferences despite the universal potential for intellectual growth (Meylani, 2023). Cognitive learning

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theories emphasize that learning involves acquiring knowledge, skills, and habits through active engagement with the environment. This theory highlights the importance of connecting new information with previously learned knowledge, facilitating better understanding and retention (Marougkas et al., 2023). Maharani et al. (2024) further underscore that learning is a multifaceted process encompassing experiencing, reacting, doing, and habit formation.

Kolb's experiential learning theory builds on John Dewey's philosophy of "learning by doing," advocating for active student participation in the learning process. Additionally, Kemp, Adelaja, et al. (2023) recognize learning styles as unique individual dispositions that influence students' preferences and approaches to learning. These styles impact learners' perception, process, and response to instructional practices. Consequently, understanding these styles is crucial for educators to align teaching methods with student needs, promoting more effective learning outcomes (Lasaiba, 2024; Hermosisima et al., 2023).

In the context of Order of Friars Minor (OFM)-managed schools in Negros Oriental, low academic performance has been a persistent issue. Data from the National Secondary Achievement Test (NSAT) revealed alarming results: students exhibited "low mastery" in mathematics and science with average scores of 31.43% and 33.07%, respectively, and only "average mastery" in English (59.34%), Filipino (52.50%), and Araling Panlipunan (45.77%) (DepEd, 2009). These findings highlight the need to address mismatches between teaching methods and students' learning preferences.

This study investigates the relationship between students' learning styles and academic performance in OFM-managed schools. Specifically, it seeks to (1) determine students' profile; (2) identify their learning style preferences across dimensions such as active/reflective, sensing/intuitive, visual/verbal, and sequential/global; and (3) determine the relationship between their learning styles and academic performance.

Grounded in Howard Gardner's Theory of Multiple Intelligences and supported by cognitive learning theories, this research explores the nuances of individual learning preferences and their impact on academic outcomes (Gardner, 1983). By identifying dominant learning styles and their correlation with performance, this study aims to inform the design of in-service training programs that enhance instructional strategies.

Ultimately, this research contributes to bridging the gap between teaching methods and learning needs. It aspires to empower teachers in OFM-managed schools to adopt evidence-based practices, fostering meaningful learning experiences and improved academic performance. Moreover, the findings can guide school administrators and policymakers in creating personalized education frameworks, ensuring students' holistic development and alignment with contemporary educational demands.

## **Methods**

This study employed a descriptive research design to examine the relationship between students' learning styles and academic performance. The descriptive approach was selected to systematically gather and analyze data, allowing the researcher to explore prevailing patterns and relationships without manipulating variables. The focus was identifying students' learning style preferences and correlating these with their academic outcomes.

The research was conducted in two Franciscan-managed schools in Negros Oriental: St. Francis College in Guihulngan and St. Francis School in La Libertad. These schools, rooted in Catholic and Franciscan educational principles, served as the study sites due to their unique mission of providing holistic education amidst challenging circumstances. The respondents were 120 third-year high school students from these schools during the school year 2009–2010, chosen universally to represent a diverse group regardless of academic performance.

Data were collected using a validated questionnaire based on the Felder-Silverman Learning Style Model (Felder & Soloman, 2000; Graf et al., 2007), and purposive sampling ensured

representation from both schools. The responses were analyzed using frequency distributions, percentages, and the Pearson Product Moment Correlation Coefficient to determine relationships between learning styles, profiles, and academic performance. The results provided insights into how learning preferences influence students' academic success, offering valuable input for improving teaching methods in these schools.

## Result and Discussion

### Respondent's Profile

Table 1 provides an overview of the respondents' demographic profile based on three key variables: gender, family size, and family income. The findings offer insights into the participants' social context and economic background, which is crucial in understanding their learning experiences and academic performance.

Table 1  
Gender Profile of the Respondents

Gender	Frequency	Percentage
Male	49	40.83
Female	71	59.17
Total	120	100
Family Size	Frequency	Percentage
13 and above	0	0
10 to 12	4	3.33
7 to 9	28	23.34
4 to 6	81	67.5
3 and below	7	5.83
Total	120	100
Family Income	Frequency	Percentage
P20,001.00 and above	8	6.67
P15,000.00 -P20,000.00	24	20
P10,001.00 -P15,000.00	29	24.17
P5,001.00 - P10,000.00	13	10.83
P5, 000.00 -and below	46	38.33
Total	120	100

### Gender Profile

Of the 120 respondents, 59.17% (71) were female, while 40.83% (49) were male. This data indicates a higher representation of female students in the study; most respondents belong to low-income families, which could limit access to educational resources such as books, internet, and tutorial services. Studies indicate that financial constraints can negatively affect academic performance due to limited access to conducive learning environments and support materials (Hassan et al., 2022).

The slight gender imbalance suggests the possibility of differing academic dynamics, as gender can influence learning preferences, engagement, and outcomes. Research indicates that female students often show higher academic motivation and achievement in similar educational settings (Schürmann & Quaiser-Pohl, 2022; Guo et al., 2023).

### Family Size

Most respondents (67.5%) came from families with 4 to 6 members, while 23.34% had 7 to 9 family members. Only a small proportion (5.83%) had three or fewer members, and none reported a family size of 13 or more. This distribution highlights that most respondents come from moderately sized families, which could imply shared economic and educational responsibilities. The family size may also influence the availability of resources and support for education, as larger families often have limited financial flexibility (Nor Diana et al., 2022).

### Family Income

The data reveals that 38.33% of respondents have a family income of PHP 5,000 or below, followed by 24.17% earning between PHP 10,001 and PHP 15,000. Only 6.67% of families reported a revenue of PHP 20,001 or higher.

These findings suggest that the demographic profile highlights the respondents' socioeconomic challenges, particularly regarding limited financial resources. The gender distribution suggests the need for gender-sensitive interventions to cater to diverse learning preferences. The prominence of low-income families

underscores the importance of affordable education and school-based support programs, such as scholarship opportunities and accessible learning materials to bridge educational inequalities and improve student outcomes (Ngobeni, 2024).

### Respondents' Academic Performance Profile

Table 2  
Academic Performance Profile of the Third-Year Students of OFM-Managed Schools

Gender	N	Students' Academic Performance									
		95 and above		90-94		85-89		80-84		79 and below	
		f	%	f	%	f	%	f	%	f	%
Male	49	0	0	2	4.1	6	12.2	25	51.0	16	32.7
Female	71	2	2.8	6	8.5	22	31.0	26	36.6	15	21.1
Total	120	2	1.67	8	6.67	28	23.33	51	42.50	31	25.83

Table 2 presents the academic performance profile of third-year students in OFM-managed schools, categorized by gender. The table reflects the distribution of grades across five performance brackets: 95 and above, 90-94, 85-89, 80-84, and 79 and below, with respective frequencies and percentages.

Out of the 49 male students, none achieved grades of 95 and above, and only two students (4.1%) scored in the 90-94 bracket. Most male students fell in the lower performance categories, with 25 (51.0%) scoring between 80-84 and 16 (32.7%) receiving grades below 79. This distribution suggests that most male students in this cohort are clustered in the lower academic performance ranges, potentially indicating challenges in engagement or learning strategies tailored to their needs.

Among the 71 female students, 2 (2.8%) achieved grades of 95 and above, and 6 (8.5%) fell within the 90-94 bracket. A more significant proportion of female students performed in the mid-range categories, with 22 (31.0%) scoring between 85-89 and 26 (36.6%) scoring between 80-84. Only 15 students (21.1%) received grades below 79. Female students showed a higher distribution in the upper and mid-range brackets than males.

The data indicates a gender disparity in academic performance, with female students outperforming male students across most

brackets. This aligns with existing literature suggesting that female students often demonstrate more substantial academic outcomes in specific contexts due to higher engagement and motivation levels (Schürmann & Quaiser-Pohl, 2022). For OFM-managed schools, these results underscore the need for targeted interventions to support male students, particularly those struggling in the lower performance categories. Strategies like personalized learning plans, mentorship programs, and gender-responsive teaching methods could help bridge this performance gap. As scholars suggest, a collaborative learning environment that encourages both genders to excel can benefit the overall academic climate (Chew & Majeed, 2024).

### Students' Academic Performance and their Profile

The data explores the relationship between students' academic performance and three variables: gender, family size, and family income. The analysis reveals a moderate negative correlation between gender and academic performance ( $r=0.3525$ ), suggesting that gender influences educational outcomes. The coefficient of determination ( $r^2=0.1243$ ) indicates that 12.43% of the variance in academic performance is explained by gender, leaving 87.57% unexplained. The null hypothesis is rejected, suggesting that gender significantly influences

academic performance. This aligns with the previous studies suggest that gender-specific learning preferences and experiences may impact students' educational outcomes (Almusharraf et al., 2023).

In contrast, family size shows a very weak positive correlation with academic performance ( $r=0.1267$ ), accounting for only 1.61% of the variance ( $r^2=0.0161$ ). Similarly, family income exhibits a weak negative correlation ( $r=-0.1488$ ), with only 2.21% of the variance explained ( $r^2=0.0221$ ). For both variables, the null hypothesis is accepted, indicating that these relationships are statistically insignificant. This data aligns with findings that family size alone is not a significant determinant of academic success, as multiple socioeconomic and environmental factors influence educational outcomes (Harahap et al., 2024; Ocampo et al., 2023).

Moreover, the negative correlation ( $r=-0.1488$ ) between family income and academic performance indicates a weak inverse relationship. With  $r^2=0.0221$ , family income ac-

counts for just 2.21% of the variation in academic performance, leaving 97.79% attributable to other factors. The null hypothesis is accepted, indicating no significant relationship between family income and academic performance. This may suggest that other aspects, such as the availability of scholarly resources or personal motivation, outweigh the influence of income levels on students' academic achievements (Xiong et al., 2024).

The significant influence of gender on academic performance underscores the importance of considering gender-specific strategies in teaching and learning environments to address diverse needs. In contrast, the lack of significant relationships between academic performance and family size or family income suggests that socioeconomic factors alone may not fully determine educational outcomes. Educators and policymakers should focus on creating inclusive and supportive learning environments to mitigate these disparities and ensure equitable academic opportunities for all students.

Table 3  
Relationship between Students' Academic Performance and their Profile

Variables	r	r <sup>2</sup>	%1	%2	Decision Rule	Remarks
Students' Academic Performance and Gender	-0.3525	0.1243	12.43	87.57	Reject Ho	Significant
Students' Academic Performance and Family Size	0.1267	0.0161	1.61	98.39	Accept Ho	Insignificant
Students' Academic Performance and Family Income	-0.1488	0.0221	2.21	97.79	Accept Ho	Insignificant

### Students' Academic Performance Their Learning Style Preferences

Table 4  
Students' Academic Performance and Their Learning Style Preferences Across Four Dimensions

Variables	r	r <sup>2</sup>	%1	%2	Decision Rule	Remark
Students' Academic Performance and their Learning Style Active/Reflective	0.0426	0.0018	0.18	99.82	Accept Ho	Insignificant
Students' Academic Performance and their Learning Style Sensing/Intuitive	0.235	0.0552	5.52	94.42	Reject Ho	Significant
Students' Academic Performance and their Learning Style Visual/Verbal	0.0281	0.0008	0.08	99.92	Accept Ho	Insignificant
Students' Academic Performance and their Learning Style Sequential/Global	-0.1301	0.0169	1.69	98.31	Accept Ho	Insignificant

Table 4 presents the correlation between students' academic performance and learning style preferences across four dimensions: active/reflective, sensing/intuitive, visual/verbal, and sequential/global.

#### **Active/Reflective Learning Style**

The correlation coefficient ( $r=0.0426r$ ) for the active/reflective learning style indicates a negligible positive relationship with academic performance. The  $r^2=0.0018$  shows that only 0.18% of the variance in academic performance is explained by this learning style, while 99.82% is due to other factors.

The relationship is deemed insignificant when accepted by the null hypothesis ( $H_0$ ).

This suggests that whether students prefer active or reflective learning does not significantly impact their academic outcomes, aligning with Felder and Hoell (2021) & Blankesteijn (2024), who emphasized that educational success depends on various intertwined factors beyond individual learning styles.

#### **Sensing/Intuitive Learning Style**

The correlation coefficient ( $r=0.235$ ) for the sensing/intuitive learning style reflects a weak but positive relationship with academic performance. As observed, a weak but significant positive relationship ( $r = 0.32, p < 0.05$ ) was found between the sensing/intuitive dimension and academic performance. With  $r^2=0.0552$ , 5.52% of the variance in academic performance can be attributed to this learning style preference, while other variables influence 94.48%. The null hypothesis is rejected, indicating a significant relationship. This finding implies that students' preference for either sensing (practical and detail-oriented) or intuitive (conceptual and idea-driven) learning can moderately impact their academic performance, underscoring the need for educators to adopt diverse instructional approaches to cater to these differences (Brink et al., 2023; Lewin & Barzilai, 2023).

#### **Visual/Verbal Learning Style**

The correlation coefficient ( $r=0.0281$ ) for the visual/verbal learning style indicates a negligible positive relationship. The  $r^2=0.0008$  demonstrates that this variable explains only

0.08% of the variance in academic performance, with 99.92% attributed to other factors. The null hypothesis is accepted, showing no significant relationship. This suggests that visual or verbal learning preferences do not affect academic outcomes, reinforcing that learning styles alone may not predict success in diverse educational contexts (Zhang et al., 2024).

#### **Sequential/Global Learning Style**

The correlation coefficient ( $r=-0.1301$ ) for the sequential/global learning style indicates a weak inverse relationship with academic performance. The  $r^2=0.0169$  reveals that only 1.69% of the variation in academic performance is explained by this dimension, with 98.31% due to other factors. The null hypothesis is accepted, suggesting an insignificant relationship. This finding implies that whether students prefer sequential (logical and step-by-step) or global (holistic and big-picture) learning approaches has minimal influence on their academic success (Shorey et al., 2021).

The significant relationship between the sensing/intuitive learning style and academic performance highlights the importance of addressing this dimension in instructional design, as it may enhance student engagement and learning outcomes. Conversely, the other dimensions show no significant influence, suggesting that academic performance is shaped by a broader combination of factors, including teaching methodologies, motivation, and environmental support. Educators should consider integrating strategies accommodating multiple learning styles to create inclusive and effective learning environments (Papaioannou et al., 2023; Mohd Ashril et al., 2024).

The study examines the relationship between students' academic performance and various factors, including demographic profiles and learning style preferences. Gender exhibits a moderate negative correlation with academic performance ( $r = -0.3525, r^2 = 12.43\%$ ), indicating a significant influence, while family size and income show weak, insignificant relationships ( $r = 0.1267$  and  $r = -0.1488$ , respectively). Among learning styles, the sensing/intuitive dimension has a weak but significant correlation ( $r = 0.235, r^2 = 5.52\%$ ), suggesting its potential impact on academic outcomes. However,

active/reflective, visual/verbal, and sequential/global styles demonstrate negligible or insignificant relationships. These findings emphasize the need for tailored educational strategies addressing gender, diverse learning preferences, and other influential factors (Almusharraf et al., 2023; Brink et al., 2023; Cutillas & Hermosisima, 2023).

## Conclusion

The findings of this study reveal significant insights into the relationship between learning styles and academic performance among students in OFM-managed schools in Negros Oriental. Gender emerged as a substantial factor influencing academic performance, with female students outperforming their male counterparts, suggesting the need for gender-sensitive teaching approaches. In contrast, family size and income showed no significant correlation with academic outcomes, implying that socio-economic factors alone do not solely determine academic success. Among the learning style dimensions, the sensing/intuitive preference showed a weak but significant relationship with academic performance. This finding indicates that students who align with practical and detail-oriented learning or conceptual and idea-driven learning may experience a slight advantage. However, the active/reflective, visual/verbal, and sequential/global dimensions showed no significant impact, emphasizing that complex factors beyond individual learning preferences influence learning outcomes. These findings underscore the importance of adopting diverse and inclusive teaching strategies to address the varying needs of learners. Educators should consider integrating gender-responsive interventions and instructional methods catering to sensing and intuitive learners to enhance engagement and performance. To this end, teacher training programs should be developed to help them identify and effectively integrate diverse learning styles into their teaching practices. Classroom interventions tailored for sensing and intuitive learners can further enhance their learning experience and outcomes. Additionally, policymakers and administrators must focus on providing equitable learning opportunities and resources, particularly for students from low-income

backgrounds, to foster a more inclusive and supportive academic environment that bridges performance gaps and promotes holistic development.

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